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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------------|-------------|----------------------|---------------------|------------------|
| 10/669,334 | 09/25/2003 | Bunro Noguchi | 03500.017677. | 4128 |
| 5514 | 7590 | 03/27/2006 | EXAMINER | |
| FITZPATRICK CELLA HARPER & SCINTO | | | BEATTY, ROBERT B | |
| 30 ROCKEFELLER PLAZA | | | ART UNIT | |
| NEW YORK, NY 10112 | | | PAPER NUMBER | |
| | | | 2852 | |

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/669,334

Applicant(s)

NOGUCHI ET AL

Examiner

Robert Beatty

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9-11 is/are rejected.
- 7) ☒ Claim(s) 5-8 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. Claims 5-6 are objected to because of the following informalities:

in claims 5 and 6, the phrase "ratio of an image" is unclear. It is believe this should be changed to --print rate--. Appropriate correction is required.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4,9 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito et al.

Saito et al. teach an image forming apparatus comprising an image bearing member 1, image forming means for forming a toner image on the image bearing member, cleaning means (developer simultaneously cleans and develops the toner image -- see col.1, lines 29-40) and a contactable charging member 2 which is supplied with a superimposed AC+DC bias when the charger faces an image forming region of the image bearing member and with only a DC bias when the charger faces a non-image forming region of the image bearing member. A controller

will switch the bias to the charger between the AC+DC mode and the DC mode. The non-image forming region can be after the image forming region or between image forming regions. See for example, col.4, lines 20-52. Since the DC bias is applied to the charger in a non-image region of the image bearing member while the image bearing member rotates, it can be said that the controller "prolongs" the image bearing rotation.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. in view of Tsuruya et al.

Saito et al. taught supra discloses most of what is claimed except the shape factors of the toner used, using an intermediate transfer belt, and charging residual toner on the intermediate transfer belt to an opposite polarity from its normal polarity. Tsuruya et al. teach an image forming apparatus which uses toner having a shape factor SF-1 between 100 - 150 and SF-2 between 100-140 (see paragraph 114). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use this type of shape factor for the toner because the toner

will be more spherical and thus retain an more uniform charge thus improving image quality (paragraph 120 -121). In addition, the use of an intermediate transfer member is very well known in the art for the purpose of forming superimposed color images of which the examiner takes Official Notice. Additionally, the charging of residual toner on the intermediate transfer belt to an opposite polarity is very well known for the purpose of retransferring this toner back to the image bearing member so as to be cleaned of which the examiner takes Official Notice.

5. Claims 5-8,12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

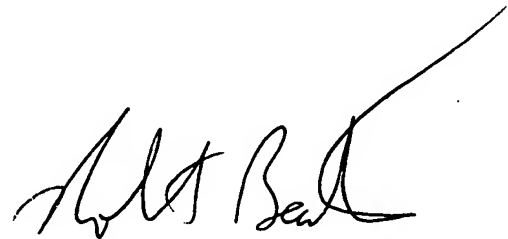
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shigezaki et al., Hashimoto et al., Ohki, Aoki et al., Hayakawa et al, EPA '047, Araya (JP), and Kono (JP) all teach AC + DC biases applied to contact charging members in image forming appartus.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Beatty whose telephone number is (571) 272-2130. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley, can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Robert Beatty', with a long, sweeping line extending from the end of the signature.

Robert Beatty
Primary Examiner
Art Unit 2852

March 19, 2006